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FIG. 1

BOX 1:

*** ** *

Ec	(20)	DGGMGTMIQ	(SEQ ID NO: 3)
Ss	(20)	DGAMGTNLQ	(SEQ ID NO: 4)
Ml2	(5)	DGAMGTQLQ	(SEQ ID NO: 5)
Hi	(20)	DGAMGTMIQ	(SEQ ID NO: 6)
Ce	(22)	DGAMGTMIQ	(SEQ ID NO: 7)
Hs	(34)	DGGMGTMIQ	(SEQ ID NO: 8)

BOX 2:

Ec	(752)	ATVKGDVHDIGKN	(SEQ ID NO: 9)
Ss	(729)	ATVKGDVHDIGKN	(SEQ ID NO:10)
Ml2	(726)	ATVKGDVHDIGKN	(SEQ ID NO:11)
Hi	(142)	ATVKGDVHDIGKN	(SEQ ID NO:12)
Ce	(766)	ATVKGDVHDIGKN	(SEQ ID NO:13)
Hs	(778)	ATVKGDVHDIGKN	(SEQ ID NO:14)

BOX 3:

** ** *

Ec	(1095)	LAEAFAEYLH	(SEQ ID NO:15)
Ss	(1085)	MAEALAEWTH	(SEQ ID NO:16)
Ml1	(56)	LTEALAEYWH	(SEQ ID NO:17)
Hi	(490)	LAEAMAEYLH	(SEQ ID NO:18)
Ce	(1084)	LAEAYAAYLH	(SEQ ID NO:19)
Hs	(1133)	LAEAFAEELH	(SEQ ID NO:20)

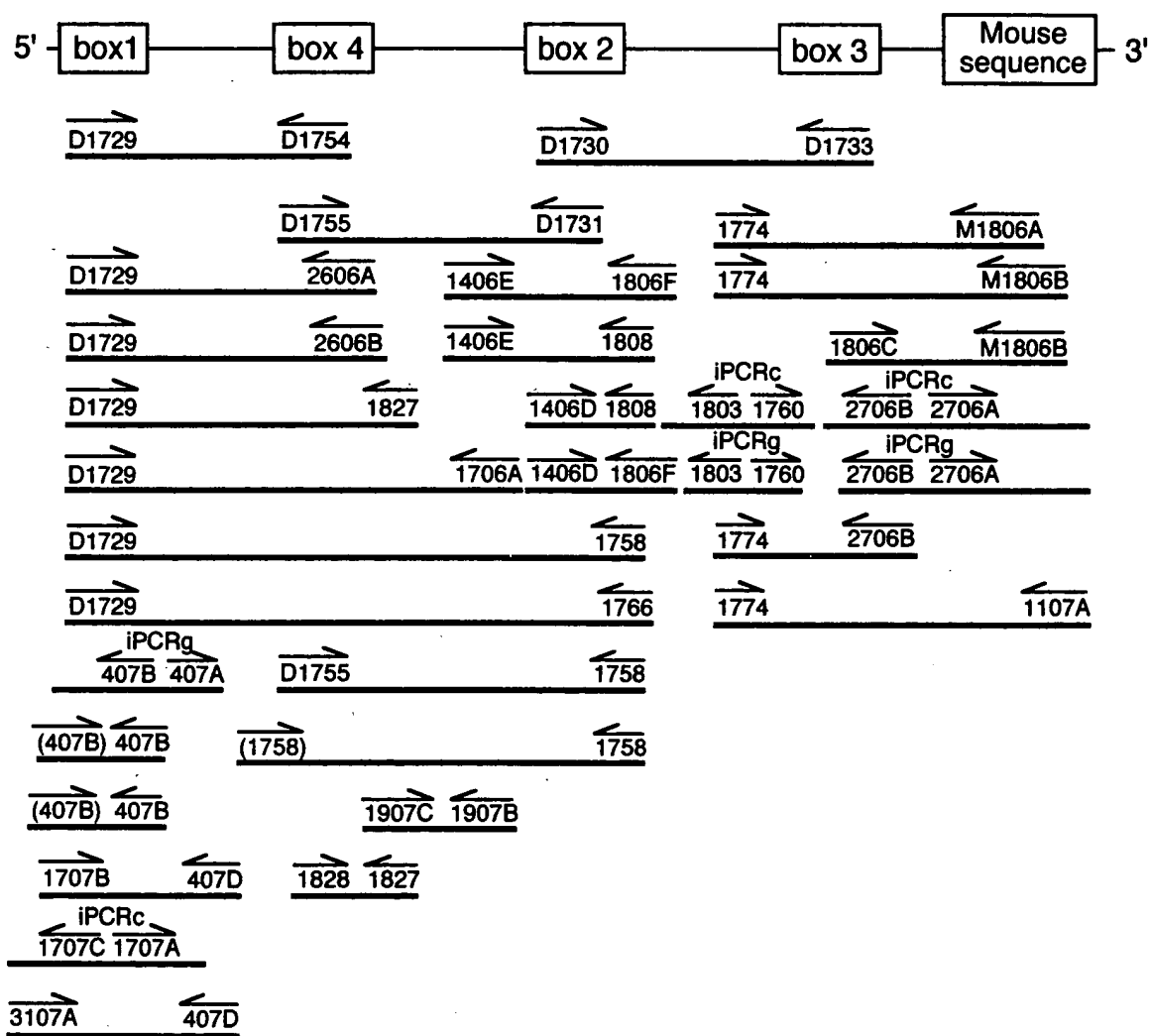
BOX 4:

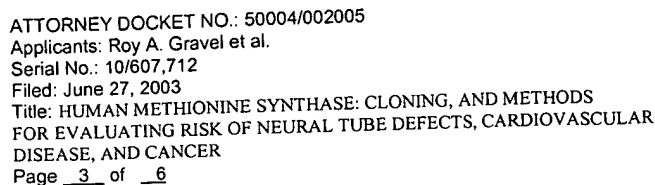
***** **

Ec	(262)	GGCCGTTPOHI	(SEQ ID NO:21)
Ss	(243)	GGCCGTRPDHI	(SEQ ID NO:22)
Ml2	(226)	GGCCGTTPDHI	(SEQ ID NO:23)
Ce	(264)	GGCCGTTPDHI	(SEQ ID NO:24)
Hs	(321)	GGCCGSTPDHI	(SEQ ID NO:25)



FIG. 2



[illegible]



ATTORNEY DOCKET NO.: 50004/002005
Applicants: Roy A. Gravel et al.
Serial No.: 10/607,712
Filed: June 27, 2003
Title: HUMAN METHIONINE SYNTHASE: CLONING, AND METHODS
FOR EVALUATING RISK OF NEURAL TUBE DEFECTS, CARDIOVASCULAR
DISEASE, AND CANCER
Page 4 of 6

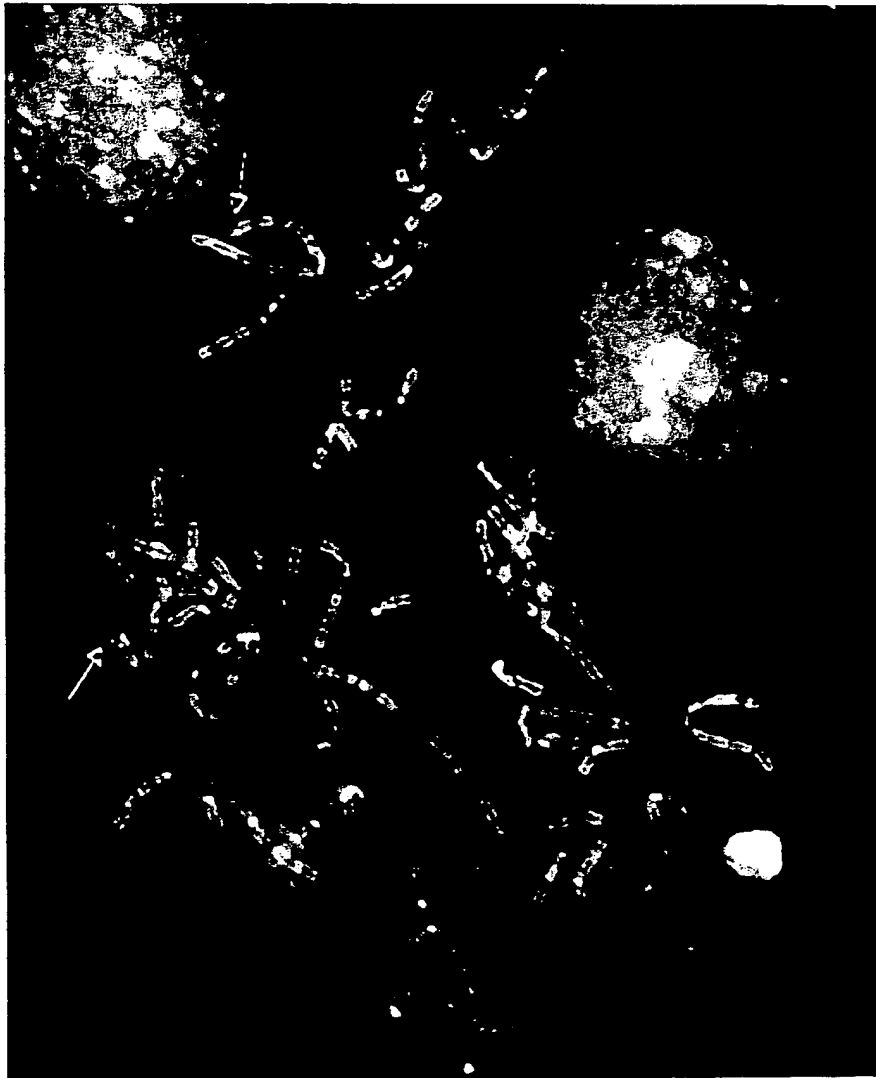


FIG. 4



FIG. 5C

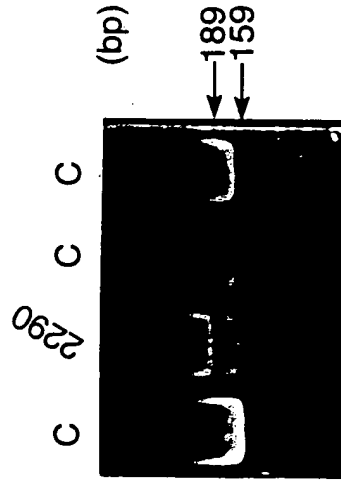


FIG. 5B



FIG. 5A

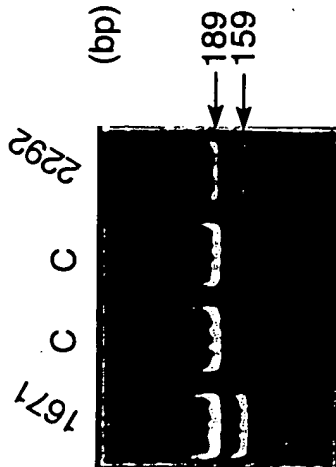




FIG. 6

box 2

*****.* . . . * . . . * . . . *
Ec IATVKGDVHDIGKNIVGVVLQCNNYEIVDLGVMVPAEKILRTAKEVNADL
Hi IATVKGDVHDIGKNIVSVVMQCNFEVIDLGVMVPADKIIQTAINQKTDI
Ce IATVKGDVHDIGKNIVSVVLGCNNFKVVDLGVMTPCENIIKAAIEEKADF
Ml LATVKGDVHDIGKNLVDIILSNNGYEVVNLGIKQPITNILEVAEDKSADV
Ss IATVKGDVHDIGKNLVDIILSNNGYRVVNLGIKQPVENII EAYKKHRPDC
Mm LATVKGDVHDIGKNIVGVVLACNNFRVIDLGVMTPCDKILQAALDHKADI
Hs LATVKGDVHDIGKNIVGVVLGCNNFRVIDLGVMTPCDKILKAALDHKADI

.....* . * . . . * . . . *
Ec IGLSGLITPSLDEMNVNAKEMERQG--FTIPLLIGGATTSKAHTAVKIEQNY
Hi IALSGLITPSLDEMEYFLGEMTRLG--LNLPMIGGATTSCHEHTAIKLYPKY
Ce IGLSGLITPSLDEMNVYAKEMNRVG--LNIPLLIGGATTSKTHTAVKISPRY
Ml VGMSGLLVKSTVIMKENLEEMNTRGVAEKFPVLLGGAALTRSYVENDLAEVY
Ss IAMSGLLVKSTAFMKENLEVFNQEG--ITVPVILGGAALTPKFVHQDCQNTY
Mm IGLSGLITPSLDEMIFVAKEMERLA--IKIPLLIGGATTSRHTAVKIAPRY
Hs IGLSGLITPSLDEMIFVAKEMERLA--IRIPLLIGGATTSKTHTAVKIAPRY

Mutations:

Δ

.....* . . . * . . . *
Ec -SGPTVYVQNASRTVGVVAALLSDTQR---DDFVARTRKEYETVRIQHGRKKP
Hi KQHCVFYTSNASRAVTVCATLMNPEGR---AALWEQFKKDYEKIQQSFANSKP
Ce -PHPVVHCLDASKSVVVCSSLSDMSVR---DAFLQDLNEDYEDVRQEHYASLK
Ml -EGEVHYARDAFEGCLKMDTIMSAK-RARRCAGEPGVLSRSPQ
Ss -KGQVIYGKDAFADLHFMDKLMKPAKNSHNWDDF-QGFLGEYATE-NGHNVTTD
Mm -SAPVIHVLDASKSVVVCSSLLENLR---DDYLEEILEEYEDIRQDHYESLK
Hs -SAPVIHVLDASKSVVVCSSLLENLK---DEYFEEIMEEYEDIRQDHYESLK

Mutations:

GD

Ec (SEQ ID NO: 73)
Hi (SEQ ID NO: 72)
Ce (SEQ ID NO: 71)
Ml (SEQ ID NO: 70)
Ss (SEQ ID NO: 69)
Mm (SEQ ID NO: 68)
Hs (SEQ ID NO: 67)